

# RECLAMATION

*Managing Water in the West*

**Draft Environmental Assessment**

## **Tulare Irrigation District Thompson Regulation Basin**

**EA-09-04**



**U.S. Department of the Interior  
Bureau of Reclamation**

**April 2009**

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## Acronyms

AF	Acre feet
af/y	Acre feet per year
APE	Area of Potential Effects
BMP	Best Management Practices
CALFED	CALFED Bay-Delta Program
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CO	Carbon monoxide
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
EPM	Environmental Protection Measures
ESA	Federal Endangered Species Act
FKC	Friant-Kern Canal
FWCA	Fish and Wildlife Coordination Act
ISMND	Initial Study Mitigated Negative Declaration
ITA	Indian Trusts Asset
mph	miles per hour
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NO <sub>x</sub>	Nitrogen oxides
NRHP	National Register of Historic Places
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter
Reclamation	U.S. Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TID	Tulare Irrigation District
U.S.C.	U. S. Code
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compound

# **1.0 PURPOSE OF AND NEED FOR ACTION**

## **1.1 BACKGROUND**

The Tulare Irrigation District (TID) applied for a CALFED Water Use Efficiency Grant from the U.S. Bureau of Reclamation (Reclamation) for construction of the Thompson Regulation Basin (TID, 2008a). The project site is located about 4.5 miles west of the City of Tulare, on the northeast corner of Prosperity Avenue (Avenue 240) and Road 68, in Tulare County on a parcel of land obtained by TID in 2008 (See Figures 1-1 and 1-2). The project includes construction of a 6.5-acre regulation basin and associated pipelines.

The basin will be used to store and release water when required, receiving available excess water and supplying water downstream when the delivery system is short on supply. Excess water is available in the delivery system when farmers stop irrigation, and before ditch tenders have reduced the amount of water flowing downstream. If the excess water is not diverted into the basin, there will be irrecoverable losses of water. The basin will allow water to be saved and released later when farmers downstream demand the water. This system will conserve about 400 acre feet (AF) of water per year.

TID prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the Administration, Operations and Maintenance Facilities and Water Management Basin in October 2008 to meet California Environmental Quality Act (CEQA) requirements (TID, 2008b). This IS/MND evaluated impacts from construction of a larger project (about 40 acres), that includes the 6.5-acre Thompson Regulation Basin and associated inlet and outlet structures and pipelines evaluated in this Environmental Assessment (EA). The project site has been in agricultural production for growing hay, alfalfa, cotton, and pistachios, and has been disked and tilled 18 inches to 3 feet in depth (see photographs in Appendix A).

## **1.2 PURPOSE AND NEED**

The purpose and need for the Thompson Regulation Basin (hereafter referenced as the Proposed Action) is to regulate water supplies and enhance the flexibility of the water delivery system in the Rocky Ford Canal and downstream canals, and to reduce the amount of water that is spilled outside the TID due to fluctuations in farmer's irrigation cycles.

Figure 1-1. Project Location

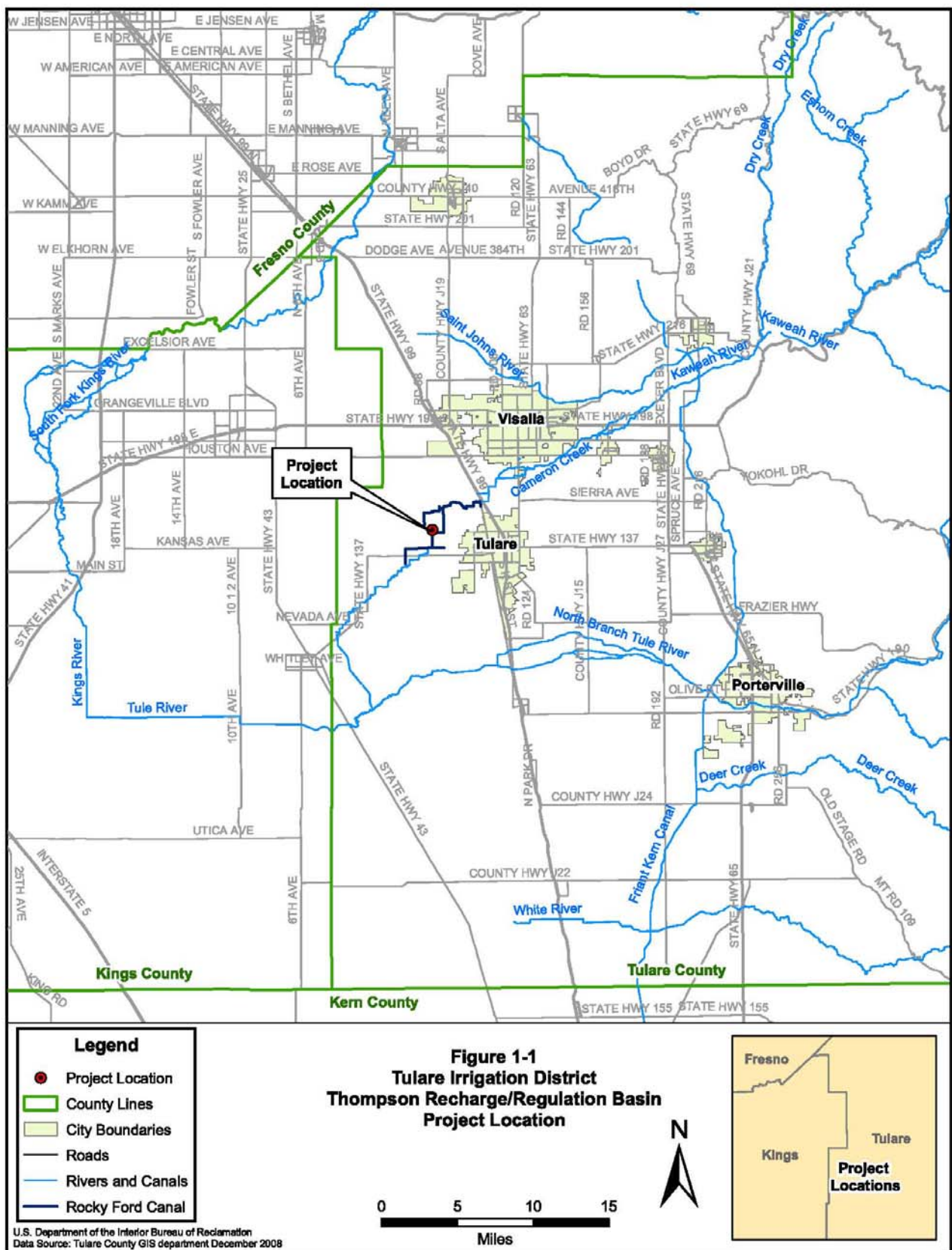
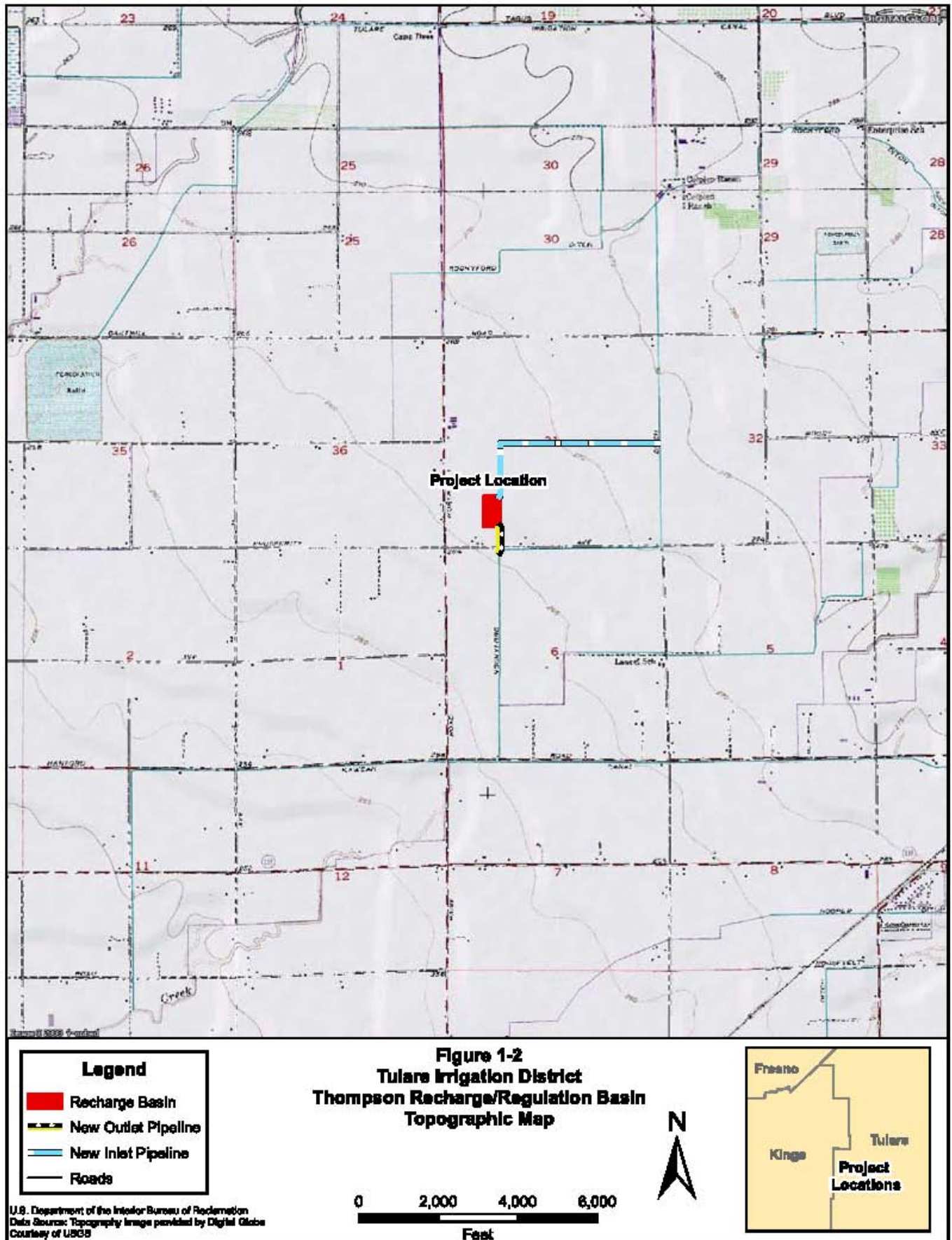


Figure 1-2. Topographic Map





## **1.3 SCOPE AND POTENTIAL ISSUES OF THIS ENVIRONMENTAL ASSESSMENT**

### **1.3.1 Scope**

Reclamation's approval is limited to approval of grant money for a portion of the construction of the Proposed Action and is the focus of this EA. The Proposed Action would benefit the entire TID service area by reducing the amount of water spilled outside of the District and increasing flexibility of water delivery to farmers within the District. The Proposed Action would be operated indefinitely as long as it benefits the District.

### **1.3.2 Potential Issues**

The TID IS/MND for the Administration, Operations and Maintenance Facilities and Water Management Basin evaluated numerous impacts and resource areas for the larger 40-acre project, which includes the Proposed Action. Resource areas included aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services, transportation and traffic, mineral resources, recreation, and utilities (TID, 2008b). The TID IS/MND concluded that there were no impacts to land use, minerals resources, and recreation, and minor impacts to the other resource areas.

Aesthetics, agricultural resources, geology and soils, mineral resources, recreation, hazards and hazardous materials, noise, population and housing, public services, and traffic and transportation would not be expected to be impacted by this Proposed Action.

The potentially affected resources from this project include:

- Air quality
- Water Resources
- Biological resources
- Land Use
- Cultural resources
- Indian Trusts Assets
- Socioeconomics
- Environmental Justice

## 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This EA considers two alternatives: the No Action Alternative and the Proposed Action. The No Action Alternative reflects current conditions and projected future conditions without the project. It serves as a basis of comparison for determining potential effects to the environment that would result from implementation of the Proposed Action

### 2.1 NO ACTION – DENY GRANT

Under the No Action Alternative, Reclamation would not approve grant funds for construction of the Proposed Action and TID would need to obtain other funding to construct the project. If the Proposed Action is not constructed, additional basin storage for the TID system would not be provided at this location. The savings of 400 AF per year (af/y) of water would not occur at this location in the TID system.

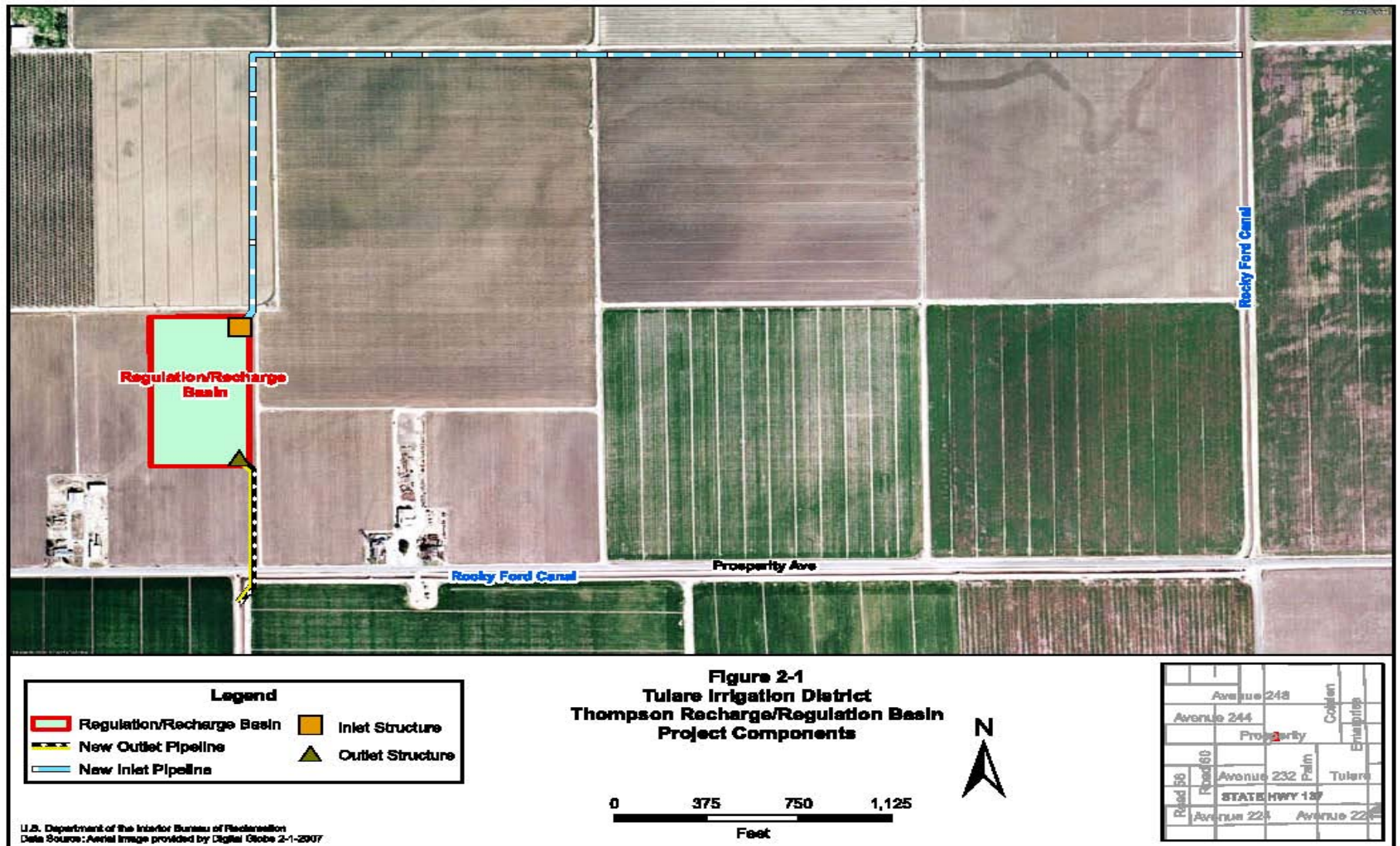
### 2.2 PROPOSED ACTION

Under the Proposed Action, Reclamation would approve the grant and issue funds to construct the 6.5-acre basin, inlet and outlet structures, and associated pipelines to connect to the Rocky Ford Canal upstream and downstream. Figure 2-1 shows the project components.

**Basin and Pipeline Construction:** The 6.5-acre basin would be constructed by excavating the area to a depth of about one foot and using the excavated material to raise the berm around the basin to about 5 feet resulting in a storage capacity of about 32.5 AF. Excess soil would be hauled off site and used for road projects, or would be stockpiled on the adjacent 18-acre parcel west of the basin.

The water inlet structure at the northeast corner and inlet pipeline already exist; however, the new pipeline would replace the existing pipeline to accommodate increased flows associated with the project. The existing 15-inch inlet pipeline would be replaced with a pipeline up to 24 inches in diameter that would allow 10 cubic feet per second of water to be delivered to the basin. The pipeline parallels the edge of the farm access road north for about ¼ mile and then turns east and parallels the farm access road about ¾ mile to the Rocky Ford Canal (see Figure 2-1). Replacing the pipeline would require digging a trench about 4 to 5 feet deep and 2 to 3 feet wide. A new outlet structure and pipeline would be constructed from the southeast portion of the basin. The pipeline would be 2 to 3 feet in diameter and extend about 767 feet south and under Prosperity Avenue (Avenue 240) to connect to the Rocky Ford Canal. The trench for the outlet pipeline would be up to 7 feet deep and 3 to 5 feet wide.

Figure 2-1 Project Components



**Construction Equipment and Staging Area:** Likely construction equipment needed for the Proposed Action would be that standard for excavation and trenching such as backhoes, excavators, earth moving equipment, cranes, and concrete mixers (if needed). The actual size and mix of equipment will be contractor-dependent and is unknown at this time. The staging area for piping and equipment will be adjacent to the project site within TID's property.

**Construction:** Earthwork for basin construction is planned to begin in May 2009. The new pipelines would be constructed in September 2009 after the irrigation season has ended. Operation of the basin is anticipated to begin in 2010. TID would obtain a Special Use Permit from the Tulare County Planning Commission to construct the basin.

## 2.3 ENVIRONMENTAL PROTECTION MEASURES

TID will implement Environmental Protection Measures (EPM) to reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume that the EPMs specified in Table 2-1 would be fully implemented.

**Table 2-1. Environmental Protection Measures**

Resource	Environmental Protection Measure
Air Quality	Comply with San Joaquin Valley Air Pollution Control District Regulation VIII to control fugitive dust.
Air Quality	All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
Air Quality	All on-site unpaved roads or off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
Air Quality	All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of dust emissions by applying water or presoaking.
Air Quality	When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emission, and at least six inches of freeboard space from the top of the container shall be maintained.
Air Quality	All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each work day. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
Air Quality	Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
Air Quality	Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.
Water Resources	Hazardous materials would not be drained onto the ground, the canal, or into drainage areas. All waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials, would be removed to a disposal facility permitted to accept such materials.
Water Resources	Construction materials would not be stockpiled or deposited near the canal where they could be washed away by high water or storm runoff or can encroach, in any way, upon the watercourse.
Water Resources	Fueling, cleaning, and maintenance of equipment would not be allowed except in designated areas away from the canal.
Water Resources	Grading activities would use erosion and sediment control measures.

**Table 2-1. Environmental Protection Measures**

<b>Resource</b>	<b>Environmental Protection Measure</b>
Water Resources	A construction Storm Water Pollution Prevention Plan (SWPPP) would be prepared and Best Management Practices (BMP) would be implemented.
Biological Resources	A worker education program would be developed and given by an approved biologist.
Biological Resources	Preconstruction surveys would be conducted for special-status species, between 14 and 30 days prior to start of construction for San Joaquin kit fox and no more than 14 days prior to construction for Swainson's hawk.
Biological Resources	If any signs of San Joaquin kit fox are detected during preconstruction surveys, TID would follow the Standardized Recommendations for Protection of the San Joaquin kit fox Prior to or During Ground Disturbance (USFWS 1999).
Biological Resources	A pre-construction nest survey for avian predators and other resident and migratory birds shall be conducted prior to construction if any heavy equipment operations are to occur during the nesting season (February 15 through September 15). All trees, vegetation, and small mammal burrows on the site shall be inspected for nests. If any occupied nests are observed, heavy equipment operations shall be minimized or avoided until the young have fledged and nesting has ceased. If this is not feasible, the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), would need to be contacted for guidance on how to proceed. The USFWS would prescribe specific mitigation dependent upon the particular species involved and the manner in which heavy equipment operations are to be conducted.
Cultural Resources	In the unlikely event that any cultural or human remains are encountered during project implementation, all work in the area of the find will halt and Reclamation's Regional Archeologist will be notified immediately. If cultural resources are determined to be historic properties pursuant to 36 CFR Part 60, Reclamation will continue consultation pursuant to 36 CFR Part 800.13(b) in order to avoid, minimize, or mitigate any adverse affects to such properties. If human remains are discovered, or a cultural resource is determined by Reclamation to be a Native American cultural item, those remains and/or items will be treated according to the provisions set forth by the Native American Graves Protection and Repatriation Act. The project will not resume until Reclamation provides a written notice to proceed.

## **3.0 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES**

This section discusses the existing environment in the project area and identifies environmental resources. Each of the environmental resources was analyzed to determine the effects from the alternatives. This section includes a discussion of the potential future environmental consequences on each resource. Relevant resource areas discussed in this section include air quality, surface water, biological resources, land use, cultural resources, Indian Trusts Assets (ITAs), socioeconomics, and environmental justice.

### **3.1 AIR QUALITY**

#### **3.1.1 Affected Environment**

The Proposed Action lies within the San Joaquin Valley Air Basin which is managed by the San Joaquin Valley Air Pollution Control District (SVJAPCD). To protect health, the SVJAPCD is required by Federal law to adopt stringent control measures to reduce emissions.

Section 176 (c) of the Clean Air Act (42 U.S. Code [U.S.C.] 7506 (c)) requires any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the Federal Clean Air Act (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such Federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each Federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact, conform to the applicable SIP before the action is taken.

On November 30, 1993, the U.S. Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 Code of Federal Regulations (CFR) 93 Subpart B for all Federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed Federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or exceed certain de minimis amounts, thus requiring the Federal agency to make a determination of general conformity.

The following de minimis amounts for the SJVAPCD are presented in Table 3-1.

<b>Table 3-1</b> <b>General Conformity de minimis Thresholds</b>		
<b>Pollutant</b>	<b>Federal Status</b>	<b>De minimis (Tons Per Year)</b>
VOC (as an ozone precursor)	Nonattainment serious 8-hour ozone	50
NO <sub>x</sub> (as an ozone precursor)	Nonattainment serious 8-hour ozone	50
PM <sub>10</sub>	Nonattainment moderate	100
CO	Attainment Maintenance	100

Sources SJVAQMD 2009; 40 CFR 93.153

VOC Volatile Organic Compound

NO<sub>x</sub> Nitrogen oxides

PM<sub>10</sub> Particulate matter less than 10 microns in diameter

CO Carbon monoxide

### 3.1.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, there would be no change in or effects to air quality.

#### **Proposed Action**

Under the Proposed Action, construction activities would include site grading, berm construction, and pipeline replacement and installation for about 1.1 miles using heavy equipment such as backhoes, excavators, cranes, and dump trucks. The bottom of the basin would be excavated by about one foot and berms would be raised to about 5 feet around the regulation basin and pipeline trenching would occur to a maximum depth of 7 feet. Air emissions would occur during initial construction and would be minimal during operation and maintenance. Construction emissions were modeled for the TID IS/MND for regulation basin construction using a construction emissions calculator. NO<sub>x</sub> and PM<sub>10</sub> emissions were 8.56 and 0.16 tons per year, respectively (TID, 2008b). VOC emissions were not calculated because equipment emissions factors were not available; however, VOC emissions are typically less than emissions for NO<sub>x</sub> and PM<sub>10</sub> for earth-moving projects and would also not be expected to exceed the general conformity de minimis thresholds.

The Proposed Action would implement EPMs listed in Table 2-1 that are specified under Regulation VIII of the SJVAPCD for any type of ground-moving activity to reduce construction-related PM<sub>10</sub> emission impacts. The Proposed Action would not exceed EPA conformity thresholds and would implement EPMs that mirror measures recommended by the air district, thereby minimizing construction effects.

## 3.2 WATER RESOURCES

This section identifies and evaluates potential effects of the alternatives on water quality for surface water resources for the project site.

### 3.2.1 Affected Environment

TID operates and maintains a 330-mile canal and pipeline distribution system along with 1,110 acres of groundwater recharge/regulation basins. TID delivers surface water to approximately 230 farms in the District's service area of about 70,000 acres (TID, 2009). TID provides only agricultural water supplies and does not service the city of Tulare. Water for Tulare is extracted from the ground and furnished through City-owned facilities.

Surface water supply for TID consists of diversions from the Kaweah River and contract deliveries from the Central Valley Project (CVP) via the Friant-Kern Canal (FKC). TID obtains about 70,000 af/y from the Kaweah River (Reclamation, 2008) (see Figure 1-1). TID entered into a long-term renewal contract with Reclamation in 1952 for 30,000 af/y of Class 1 and 141,000 af/y of Class 2 water. Class 1 water is a "firm" supply and Class 2 water is less reliable water that may be available after all Class 1 obligations have been met.

TID has three turnouts along the FKC – TID's Main Intake Canal, St. Johns, and Lower Kaweah River. These three channels convey local and CVP water supplies to TID's delivery system. TID is facing a loss of approximately 20 percent of the imported water supply as the Friant Division of the CVP Improvement Act moves to restore salmon fishery on the San Joaquin River. The Rocky Ford Canal delivers upstream water from the TID main canal system to Cameron Creek.

TID has maintained an active conjunctive use program through their direct and "in-lieu" recharge programs. TID operates and maintains about 1,100 acres of percolation basins that are used in wet years to recharge underground water supplies. This program relies on maximum use of available surface water in wet years so that minimum extraction of groundwater occurs. However, long-term water level trends in TID, and the Kaweah basin in general, indicate continued overdraft of groundwater resources despite TID's importation of CVP supplies (Reclamation, 2008a).

Water quality of the waterways and reservoirs of the United States is protected by the Clean Water Act that regulates and establishes pollution standards. The California Clean Water Enforcement and Pollution Prevention Plan Act of 1999 tasked the State Water Resources Control Board, Regional Water Quality Control Boards (RWQCB) with the responsibility of developing and enforcing water quality issues. The RWQCBs prepare Water Quality Control Plans (commonly referred to as Basin Plans), which designate the beneficial uses of regional receiving waters, set water quality objectives, and formulate regional water quality management programs for surface waters and groundwater. The project site is under jurisdiction of the Central Valley RWQCB (CVRWQCB), which issued a Water Quality Control Plan for the Tulare Lake Basin (TID, 2008b). According to the Tulare Lake Basin Plan, beneficial uses for groundwater include agricultural supply and beneficial uses for surface water include agricultural supply.

Statewide General Permit No. 99 08 DWQ requires all dischargers where construction activity disturbs one acre or more to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMP) to prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into downstream receiving waters. The General Permit is enforced by the CVRWQCB in the project area.



### **3.2.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, surface water resources provided from the Rocky Ford Canal would not be as easily regulated for downstream farmers and additional basin storage for the TID system would not be provided. Farmers downstream would have less reliable water available upon demand and would rely more on their groundwater wells to supplement surface water demands. This would further deplete groundwater supplies, thereby contributing to lowering the groundwater table that may ultimately cause subsidence.

#### ***Proposed Action***

Implementation of the Proposed Action would assist TID in meeting the objectives of providing flexibility and efficiency in water delivery to farmers for agricultural use, reduce water that is spilled outside TID, and provide groundwater recharge.

The Proposed Action would allow excess surface water supplies to be stored in the basin to provide increased flexibility for surface water supplies for downstream farmers. The Proposed Action would not impede water conveyance or deliveries during construction or operation. Another benefit of the project is groundwater recharge from water percolating through the soil in the basin. However, based on a geotechnical analysis conducted in 2007, the soils in the area of the 6.5-acre basin are less suitable for recharge due to the level of fines in the soil than soils west of the basin, also owned by TID and part of another project (TID, 2008a). During years when water is limited, there will only be incidental recharge from water stored in the basin on a short-term basis. During times when water is readily available, retention times in the basin can increase, thereby allowing more recharge to the groundwater supplies.

TID is a partial owner and participant with the Kaweah River Power Authority in the Terminus Power Plant. TID receives large fluctuations in water during the irrigation season to assist the power plant in maximizing power generation during peak demand hours of the day. Therefore, TID must utilize basin space throughout its District to store water required to create power during peak demand releases (TID, 2008a). The Proposed Action will increase basin storage capacity throughout TID. Also, since the basin will store surface water and provide a more reliable source of surface water for the farmers when requested, the farmers will be less likely to use their deep groundwater well pumps and thus also conserve energy.

A grading permit would be required from Tulare County, which will require erosion protection measures to protect potential storm water runoff from leaving the site during grading and construction of the basin and pipelines. Because the project construction disturbs greater than one acre of soil, Statewide General Permit No. 99 08 DWQ that applies to storm water discharges associated with construction activity would be required. TID would prepare a SWPPP and submit a Notice of Intent to the CVRWQCB. The project would implement measures in accordance with the SWPPP and implement EPMs to result in minimum impacts to water quality.

The Proposed Action would implement EPMs, presented in Table 2-1, to prevent any temporary, localized erosion or water quality effects.

### **3.3 LAND USE**

#### **3.3.1 Affected Environment**

The project site consists of fallow and disked agricultural land that is regularly managed to keep the site weed free. The site has historically been used to grow hay, alfalfa, cotton and pistachios. Row crop agricultural fields surround the site. The project is located within Tulare County, on Assessors Parcel Number 148-050-031. The parcel is listed in the General Plan as Rural Valley Lands Plan, in the Intensive Agriculture Area, and not within any urban boundary (see Figure 3-1). The parcel is zoned AE 40 (Agricultural 40 acre minimum) and is under Williamson Act Contract #22981, Agricultural Preserve #4448, designated Williamson Act Prime (TID, 2008b). The project site is surrounded by agricultural lands with the same zoning and Williamson Act Contracts. The AE-40 zone is exclusive for intensive and extensive agricultural uses.

#### **3.3.2 Environmental Consequences**

##### ***No Action***

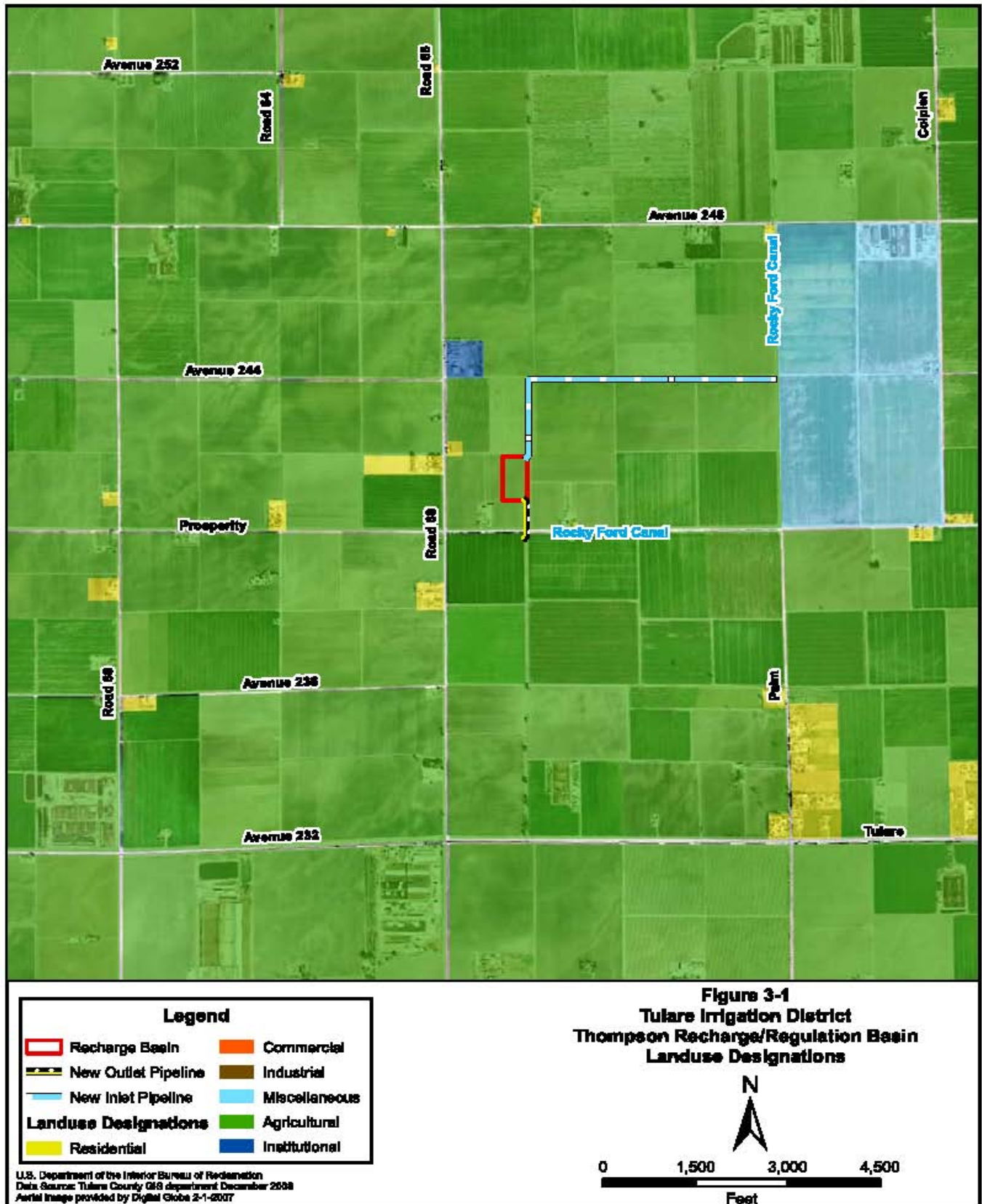
Under the No Action Alternative, conditions would remain the same as described above. Reclamation would not fund the grant for creation of the 6.5-acre basin and associated pipelines. The land would likely remain in agricultural crop production.

##### ***Proposed Action***

Construction of the basin would take 6.5 acres of land out of agricultural crop production; however, public utility structures, such as TID facilities, are agricultural-compatible land uses and are allowed in the AE-40 Zone by Special Use Permit from the Tulare County Planning Commission (TID, 2008b). The creation of the regulation basin would increase surface water supplies to support operation and survival of agricultural entities in Tulare County.

Basin and outlet pipeline construction activities would occur within TID-owned parcels and would not disturb adjoining lands or existing Williamson Act contracts. Inlet service pipeline would replace the existing pipeline and follow the same alignment along farm access roads. TID-owned land would be used for equipment staging during construction and would not affect surrounding properties. Implementing the Proposed Action would have no effect on current or future land use plans.

Figure 3-1. Land Use Designations



## 3.4 BIOLOGICAL RESOURCES

### 3.4.1 Affected Environment

The Proposed Action includes a 6.5-acre basin and about 1.1 miles of inlet and outlet pipelines. Appendix A shows site photos taken on January 27, 2009. The inlet pipeline (to be replaced) extends about 1 mile from the proposed basin to the Rocky Ford Canal beneath a ditch that parallels farm access roads shown in Photos 8 to 10 in Appendix A. The outlet pipeline will be constructed parallel to an access road from the basin south to the Rocky Ford Canal.

#### ***Special-Status Species***

The project lies within the Paige 7.5-minute quadrangle of Tulare County. A species list for this quadrangle, obtained from [http://sacramento.fws.gov/es/spp\\_list.htm](http://sacramento.fws.gov/es/spp_list.htm) on February 24, 2009 (Document Number: 090224012828), contained nine (9) federally listed species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS). No designated critical habitat was reported in the Paige quadrangle. The California Natural Diversity Database (CNDDB) was also queried for Federal- and state-listed species in the project area and within 5 miles of the project area (see Appendix B) (California Department of Fish and Game [CDFG], 2009). Past agricultural uses, including disking to control weeds, has created unsuitable habitat for many species at the project site. Special-status species and potential for occurrence at the project site are presented in Table 3-2 and discussed below.

The project area lacks dense, shrubby or emergent wetland or riparian vegetation and does not provide suitable habitat for California red-legged frog or giant garter snake. There are no rivers, lakes, or streams near the project site; therefore, the delta smelt does not occur in the area.

There are no vernal pools or elderberry shrubs at the project site; therefore, vernal pool shrimp species and valley elderberry longhorn beetle are not present.

Alkali, desert scrub, annual grassland, seasonal wetland, and valley-foothill hardwood habitats do not occur at the project site. The project site is regularly disturbed and adjacent land uses are agricultural fields containing row crops. Therefore, there is no habitat for the blunt-nosed leopard lizard, California tiger salamander, or Tipton kangaroo rat.

The project area is within the known range of the San Joaquin kit fox and could be utilized as foraging habitat. The only CNDDB-reported kit fox occurrence within 5 miles was about 3.6 miles southeast of the project site.

Although not a federally listed species, Swainson's hawk is protected by the Migratory Bird Treaty Act. Two Swainson's hawk occurrences have been recorded in the CNDDB at distances of 3.7 and 5 miles southwest of the project site. Immediately to the east of the project site is a small stand of trees that could potentially provide nesting habitat for Swainson's hawk. Therefore, Swainson's hawk has potential to occur at the project site.

### **3.4.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, conditions would remain the same as described above. Reclamation would not fund the grant for creation of the 6.5-acre basin and associated pipelines. The land would remain fallow or in agricultural crop production.

#### ***Proposed Action***

The agricultural lands in the project area have been disturbed by regular tilling to a depth of about 36 inches for planting various crops. There is no habitat on-site for any of the species listed in Table 3-2 except potential foraging habitat for the San Joaquin kit fox. Development of the Proposed Action would seasonally remove 6.5 acres of potential foraging ground for the San Joaquin kit fox. Swainson's hawks may occur at the site.

The Proposed Action would have no effect on blunt-nosed leopard lizard, California red-legged frog, California tiger salamander, Delta smelt, giant garter snake, Tipton kangaroo rat, vernal pool fairy shrimp, valley elderberry longhorn beetle, or critical habitat for these special-status species because they do not occur within the project area.

The project would implement EPMs listed in Table 2-1 that would result in no effect to special status species.

**Table 3-2. Federally Listed Species in the Paige Quadrangle**

Common Name	Scientific Name	Status	Primary Habitat and Critical Seasonal Periods	Likelihood for Occurrence in Project Site and Comments
<b>Amphibians and Reptiles</b>				
Blunt-nosed leopard lizard	<i>Gambelia</i> (= <i>Crotaphytus</i> ) <i>sila</i>	E	Relatively large lizard. Suitable habitat includes saltbush scrub and valley sink scrub. Uses small rodent burrows for shelter from predators and temperature extremes.	Unlikely. No CNDDDB occurrences documented within 5 miles of the Project site. Suitable habitat is not present at the Project site.
California red-legged frog	<i>Rana aurora</i> <i>draytonii</i>	T	Largest native frog in the Western United States. Requires dense, shrubby or emergent vegetation associated with deep still or slow-moving water. Breeds from November through March.	Unlikely. No CNDDDB occurrences documented within 5 miles of the Project site. Suitable habitat is not present at the Project site.
California tiger salamander	<i>Ambystoma</i> <i>californiense</i>	T	Terrestrial salamander. Restricted to grasslands and low foothill regions with aquatic sites for breeding that may include valley needle grassland, valley wild rye grassland, non-native grassland and wildflower fields with vernal pools or other temporary ponds. Other habitats include valley-oak woodland.	Unlikely. No CNDDDB occurrences documented within 5 miles of the Project site. Suitable habitat is not present at the Project site.
Giant garter snake	<i>Thamnophis</i> <i>gigas</i>	T	Aquatic snake. Prefers freshwater marsh and low-gradient streams. Has adapted to drainage canals and irrigation ditches. Uses burrows and soil crevices in uplands during winter dormant period. Breeding period March through April.	Unlikely. No CNDDDB occurrences documented within 5 miles of the Project site. Suitable habitat is not present at the Project site.
<b>Mammals</b>				
Tipton kangaroo rat	<i>Dipodomys</i> <i>nitratooides</i> <i>nitratooides</i>	E	One of three subspecies of the San Joaquin kangaroo rat. Scattered populations are restricted primarily to valley sink scrub east of the California Aqueduct.	Unlikely. No CNDDDB occurrences documented within 5 miles of the Project site. Suitable habitat is not present at the Project site.
San Joaquin kit fox	<i>Vulpes macrotis</i> <i>mutica</i>	E	Historic range of this species was the San Joaquin Valley, western Sacramento Valley, and portions of the Inner Coast Range. The abundance of this fox has declined due to loss of habitat and other factors including predator control, pest control programs, and interspecies competition with coyotes. Largest remaining populations occur in western Kern County.	Low. Kit fox occurrence was recorded in the CNDDDB in 1979. The occurrence was located 3.6 miles southeast of the Project site. This species may use the Project site as foraging habitat.
<b>Invertebrates</b>				
Vernal pool fairy shrimp	<i>Branchinecta</i> <i>lynchi</i>	T	Associated with ephemeral swales and vernal pools in grassland communities. Cysts hatch and shrimp become active when pools fill during the winter rainy season.	Unlikely. No CNDDDB occurrence documented within 5 miles of the Project site. No suitable habitat (seasonal wetlands or vernal pools) present at the site.

**Table 3-2. Federally Listed Species in the Paige Quadrangle**

Common Name	Scientific Name	Status	Primary Habitat and Critical Seasonal Periods	Likelihood for Occurrence in Project Site and Comments
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	Endemic with patchy distribution. Valley elderberry longhorn beetles are completely dependent on their host plant, the elderberry shrub. Adult active period is from March to June.	Unlikely. No CNDDDB occurrence documented within 5 miles of the Project site. No suitable habitat (elderberry shrub) present at the Project site or surrounding area.
<b>Fish</b>				
Delta smelt	<i>Hypomesus transpacificus</i>	T	Salt-tolerant. Endemic to the Sacramento–San Joaquin estuary, where it spends most of its adult life. Spawn in shallow, fresh or slightly brackish water upriver from the mixing zone, including the Sacramento River, Mokelumne River system, Cache Slough region, San Francisco Bay Delta, and Montezuma Slough area. Spawning occurs in fresh water between January and July.	Unlikely. No CNDDDB occurrence documented within 5 miles of the Project site. No suitable habitat present at the site.

Sources:

Federal Endangered and Threatened Species 7½ minute quads available (February 2009) at: [http://www.fws.gov/sacramento/es/spp\\_lists/auto\\_letter.cfm](http://www.fws.gov/sacramento/es/spp_lists/auto_letter.cfm)  
 California Natural Diversity Database (CNDDDB) search for Paige Quadrangle, California Department of Fish & Game (CDFG), (February 2009)

Key to Status Codes:

Federal Status:

E: Endangered  
 T: Threatened

## **3.5 CULTURAL RESOURCES**

### **3.5.1 Affected Environment**

Cultural resources is a term used to describe both ‘archaeological sites’ depicting evidence of past human use of the landscape and the ‘built environment’ which is represented in structures such as dams, roadways, and buildings. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government’s responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (NRHP). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation’s findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

The Center for Archaeological Research, California State University, conducted a records search (RS # 08-279) on August 29, 2008 (CSUB, 2008). The area researched was 40 acres (the larger project area evaluated in the TID ISMND) and encompassed the 6.5-acre basin. According to the cultural resources records search, no surveys have been performed on the project area, and no archaeological or historical sites have been recorded for the project area. One survey was performed within one-half mile of the project area, but the results were negative for archaeological or historical resources. The record search included NRHP, California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources, California State Historic Landmarks Registry, and Historic Resources Information Center.

### **3.5.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, there would be no impacts to cultural resources or historic properties since there would be no action. Under the No Action Alternative, Reclamation would not approve funding for a grant for construction of the 6.5-acre basin and associated pipelines. Conditions related to cultural resources or historic properties would remain the same as existing conditions.

#### ***Proposed Action***

The effects to historic properties pursuant to 36 CFR Part 800.5(b) of the proposed construction of the 6.5-acre basin and associated pipelines are still being determined. The agricultural land in



the project area has been heavily disturbed by being regularly tilled to a depth of about 36 inches for planting various crops. The existing TID irrigation pipeline that would be replaced by a new inlet pipeline would likely not be eligible for inclusion in the NRHP because the TID system has been extensively modified or created since 1951 and represents common structures and features found throughout the Central Valley (SHPO, 2006). The project would implement one EPM described in Table 2-1. Replacement of the inlet pipeline for the Proposed Action was not evaluated as part of the TID IS/MND (TID 2009). The inlet pipeline is buried in a ditch adjacent to farm access roads that have been heavily disturbed. Reclamation will determine appropriate compliance with Section 106 of the NHPA prior to completion of this EA.

## **3.6 INDIAN TRUST ASSETS**

### **3.6.1 Affected Environment**

An ITA is a legal interest in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITAs cannot be sold, leased or otherwise alienated without United States’ approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITAs may be located off trust land.

Reclamation shares the Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain ITAs reserved by or granted to Indian tribes, or Indian individuals by treaty, statute, or Executive Order. No ITAs are located in the project Area.

### **3.6.2 Environmental Consequences**

#### ***No Action***

No ITAs are in the project area. The condition of Indian trust resources under the No Action Alternative would be the same as it would be under existing conditions.

#### ***Proposed Action***

There are no tribes possessing legal property interests held in trust by the United States in the lands and resources near the project site. Therefore, the Proposed Action would not affect ITAs.

## **3.7 SOCIOECONOMIC RESOURCES**

### **3.7.1 Affected Environment**

The City of Visalia is located about 10 miles northeast of the project. Visalia is the Tulare county seat and has a population of 113,487 inhabitants, based on the 2006 U.S. Census. The median family income is \$61,074 and per capita income is \$23,475 (Visalia, 2009). 12.9% of the population and 10.1% of families are below the poverty line.

The closest town is Tulare about 4 miles southeast of the project site. Tulare has a population of 51,477, as of January 1, 2006 (Tulare, 2009). The main industries are agriculture, dairy, and food processing.

### **3.7.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, Reclamation would not approve the grant to construct the Proposed Action and TID would not have the opportunity to regulate water supplies for downstream farmers. This could adversely affect agricultural production and local employment.

#### ***Proposed Action***

Implementation of the Proposed Action would result in minor construction activities (grading, excavation and trenching, and pipeline installation) and would be completed within a one-year period. The ability to save 400 af/y of water in the TID would help to keep water costs low, thereby benefitting the farming industry.

## **3.8 ENVIRONMENTAL JUSTICE**

### **3.8.1 Affected Environment**

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

The racial makeup of the City of Visalia (located about 10 miles to the northeast of the project) is 81.0% White, 39.1% Hispanic or Latino, 2.3% Black or African American, 0.1% Native American, 6.9% Asian, 0.0% Pacific Islander, 7.1% from other races, and 2.0% from two or more races. Out of the total population, 28.9% of those are under the age of 18 and 9.7% are 65 years and over.

Tulare County employs seasonal workers on local farms that include migrant workers, commonly of Hispanic origin. The populations of small communities typically increase during late summer harvest.

### **3.8.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, TID would not have the flexibility to regulate local water deliveries. Without the ability to regulate water for downstream farmers, some field crops may not be planted or become stressed, and this could affect local employment for migrant workers.

#### ***Proposed Action***

No minority or low income populations were identified that would be adversely affected by construction or operation of the regulation/recharge basin. The project would help maintain agricultural production and seasonal employment, including employment for migrant farm workers.

### **3.9 CUMULATIVE EFFECTS**

The Thompson Recharge/Regulation Basin would be part of TID's larger project to construct new administration, operations, and maintenance facilities and an associated water management (recharge) basin on 40 acres. The larger TID project would provide a more modern facility to increase TID service capabilities. The 6.5-acre recharge basin would be part of TID's 1,110 acres of recharge basins and would not have adverse cumulative effects on surface water. TID's recharge basins cumulatively benefit local groundwater conditions and decrease the depletion of groundwater supplies and lowering of the groundwater table by providing recharge capabilities.

The Proposed Action and TID's larger 40-acre project would result in some loss of foraging habitat for the San Joaquin kit fox; however, this cumulative effect would be minor because of the extensive surrounding habitat. This Proposed Action and TID's larger 40-acre project, would not have adverse cumulative effects on air quality, land use, cultural resources, ITAs, socioeconomics, or environmental justice. Air quality EPMs, implemented during construction, would reduce cumulative effects to regional air quality. Recharge basins would be a compatible land use with surrounding agricultural lands and would not interfere with existing Williamson Act contracts or agricultural zoning in the surrounding area. Reclamation will determine appropriate compliance with Section 106 of the NHPA and the impacts on cultural resources prior to completion of this EA.

## **4.0 CONSULTATION AND COORDINATION**

### **4.1 FISH AND WILDLIFE COORDINATION ACT (16 USC §661 ET SEQ.)**

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (Federal and state) on all water development projects that could affect biological resources. The Proposed Action would not be considered a water development project. Therefore the FWCA does not apply.

### **4.2 Endangered Species Act (16 USC §1531 et seq.)**

Section 7 of the Endangered Species Act (ESA) requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

Although a preconstruction survey would be conducted for the San Joaquin kit fox, and conservation measures would be implemented for the construction of the basin, Reclamation has determined that there remains a low potential for an effect on the species. Reclamation determined that the Proposed Action would have no effect on other species listed or proposed for listing or critical habitats designated or proposed for designation under the ESA. There will be no effect on species or critical habitat under the jurisdiction of the National Marine Fisheries Service because of their absence from the project site. Reclamation will consult with the USFWS on this proposed action, and the EA will not be finalized until the consultation is complete.

### **4.3 MIGRATORY BIRD TREATY ACT (16 USC § 703 ET SEQ.)**

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

Migratory bird surveys that include Swainson's hawk will be completed prior to project construction to allow the Proposed Action to be in compliance with the Migratory Bird Treaty Act.

### **4.4 NATIONAL HISTORIC PRESERVATION ACT (15 USC § 470 ET SEQ.)**

The NHPA of 1966, as amended (16 USC 470 *et seq.*), is the primary Federal legislation that outlines the Federal Governments' responsibility to consider the affects of their actions on historic properties. Section 106 of the NHPA requires Federal agencies to evaluate the effects of Federal undertakings on historical, archaeological, and cultural resources. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies address these effects. Historic properties are defined as those cultural resources listed, or eligible for listing, on the NRHP. The term "cultural resources" is used to describe archaeological sites, illustrating evidence of past human use of the landscape; the built environment, represented by structures such as dams, roadways, and buildings; and resources of religious and cultural significance, including, but not limited to, structures, objects, districts, and sites. Historic properties include Traditional Cultural Places, which are resources of religious and cultural significance that are eligible for the NRHP by virtue of their traditional significance.

According to the cultural resources records search, no surveys have been performed on the project area and no archaeological or historical sites have been recorded for the project area. Improvements and modifications to TID canal systems do not change the function or character of the irrigation system. Reclamation will determine appropriate compliance with Section 106 of the NHPA prior to completion of this EA.

### **4.5 EXECUTIVE ORDER 11988 – FLOODPLAIN MANAGEMENT AND EXECUTIVE ORDER 11990-PROTECTION OF WETLANDS**

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The project features would not affect either concern. The project site is not located within a wetlands and the surrounding agricultural area is located outside of a 500-year flood plain (TID, 2008b).

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## 6.0 REFERENCES

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## APPENDIX A

### SITE PHOTOGRAPHS



**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**

Viewing Direction	Photo Description	Photo
➔	1. West side of proposed basin site, looking east.	
⬆	2. Existing access road west of proposed basin site, looking north.	

**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**

Viewing Direction	Photo Description	Photo
	3. West side of proposed basin, looking northeast.	
	4. West side of proposed basin, looking southeast.	

**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**



Viewing Direction	Photo Description	Photo
↓	5. Former dairy barn south of proposed basin site, looking south.	
↓	6. North side of residence and former dairy, looking south.	

**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**


Viewing Direction	Photo Description	Photo
	<p>7. Parcel west of proposed basin, looking west.</p>	
	<p>8. View along existing buried pipeline from proposed basin site, looking north.</p>	



**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**

Viewing Direction	Photo Description	Photo
➔	9. Close-up of Irrigation valve at inlet on northeast corner of proposed basin, looking east.	
➔	10. Location for new inlet structure (white pole) at northeast corner of proposed basin site, looking east.	

**Appendix A**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin Project**  
**January 27, 2009**

Viewing Direction	Photo Description	Photo
<b>➔</b>	11. Location for buried Inlet pipe east toward Rocky Ford canal, looking east.	

## APPENDIX B

### US FISH AND WILDLIFE SERVICE SPECIES LIST

### CALIFORNIA NATURAL DIVERSITY DATABASE INFORMATION





California Department of Fish and Game  
Natural Diversity Database  
CNDDDB Wide Tabular Report  
Paige and 8 Surrounding Quads

Name (Scientific/Common)	CNDDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
<i>Actinemys marmorata</i> western pond turtle	G3G4 S3	CDFG: SC	Fed: None Cal: None	355 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Agelaius tricolor</i> tricolored blackbird	G2G3 S2	CDFG: SC	Fed: None Cal: None	424 S:5	0	0	0	0	1	4	1	4	4	1	0
<i>Andrena macswaini</i> An andrenid bee	G1G3 S1S3	CDFG:	Fed: None Cal: None	7 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S2	CDFG: SC	Fed: None Cal: None	1182 S:3	0	1	1	1	0	0	0	3	3	0	0
<i>Atriplex cordulata</i> heartscale	G2? S2.2?	CNPS: 1B.2	Fed: None Cal: None	58 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Atriplex erecticaulis</i> Earlimart orache	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	20 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Atriplex minuscula</i> lesser saltscale	G1 S1.1	CNPS: 1B.1	Fed: None Cal: None	27 S:3	0	0	1	0	0	2	1	2	3	0	0
<i>Atriplex subtilis</i> subtle orache	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	24 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	G3 S2S3	CDFG:	Fed: Threatened Cal: None	595 S:4	0	2	0	1	0	1	0	4	4	0	0
<i>Buteo swainsoni</i> Swainson's hawk	G5 S2	CDFG:	Fed: None Cal: Threatened	1677 S:19	1	4	4	1	2	7	0	19	17	1	1
<i>Caulanthus californicus</i> California jewel-flower	G1 S1.1	CNPS: 1B.1	Fed: Endangered Cal: Endangered	63 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Charadrius montanus</i> mountain plover	G2 S2?	CDFG: SC	Fed: None Cal: None	40 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Delphinium recurvatum</i> recurved larkspur	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	79 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Dipodomys nitratoideus nitratoideus</i> Tipton kangaroo rat	G3T1 S1	CDFG:	Fed: Endangered Cal: Endangered	75 S:2	0	0	0	0	1	1	2	0	1	0	1
<i>Eumops perotis californicus</i> western mastiff bat	G5T4 S3?	CDFG: SC	Fed: None Cal: None	293 S:1	0	1	0	0	0	0	0	1	1	0	0

California Department of Fish and Game  
Natural Diversity Database  
CNDDDB Wide Tabular Report  
Paige and 8 Surrounding Quads

Name (Scientific/Common)	CNDDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
<i>Gambelia sila</i> blunt-nosed leopard lizard	G1 S1	CDFG:	Fed: Endangered Cal: Endangered	301 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Imperata brevifolia</i> California satintail	G2 S2.1	CNPS: 2.1	Fed: None Cal: None	27 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lasiurus cinereus</i> hoary bat	G5 S4?	CDFG:	Fed: None Cal: None	235 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lytta hoppingi</i> Hopping's blister beetle	G1G2 S1S2	CDFG:	Fed: None Cal: None	5 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lytta morrisoni</i> Morrison's blister beetle	G1G2 S1S2	CDFG:	Fed: None Cal: None	10 S:1	0	0	0	0	0	1	1	0	0	1	0
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	G2 S2.1	CNPS: 1B.1	Fed: Threatened Cal: Endangered	41 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Spea hammondi</i> western spadefoot	G3 S3	CDFG: SC	Fed: None Cal: None	406 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Valley Sacaton Grassland</i>	G1 S1.1		Fed: None Cal: None	9 S:1	0	0	0	1	0	0	1	0	1	0	0
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	G4T2T3 S2S3	CDFG:	Fed: Endangered Cal: Threatened	950 S:24	0	0	0	0	0	24	23	1	24	0	0



**United States Department of the Interior  
FISH AND WILDLIFE SERVICE**

Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825



February 24, 2009

Document Number: 090224012828

Ammon Rice  
Burleson Consulting, Inc.  
950 Glenn Drive, Suite 135  
Folsom, CA 95630

Subject: Species List for Bureau of Reclamation Tulare Irrigation District Thompson  
Recharge/Regulation Basin Project

Dear: Mr. Rice

We are sending this official species list in response to your February 24, 2009 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 25, 2009.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at [www.fws.gov/sacramento/es/branches.htm](http://www.fws.gov/sacramento/es/branches.htm).

**Endangered Species Division**



**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 090224012828

Database Last Updated: January 29, 2009

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**Quad Lists**

**Listed Species**

**Invertebrates**

*Branchinecta lynchi*

vernal pool fairy shrimp (T)

*Desmocerus californicus dimorphus*

valley elderberry longhorn beetle (T)

**Fish**

*Hypomesus transpacificus*

delta smelt (T)

**Amphibians**

*Ambystoma californiense*

California tiger salamander, central population (T)

*Rana aurora draytonii*

California red-legged frog (T)

**Reptiles**

*Gambelia (=Crotaphytus) sila*

blunt-nosed leopard lizard (E)

*Thamnophis gigas*

giant garter snake (T)

**Mammals**

*Dipodomys nitratoideus nitratoideus*

Tipton kangaroo rat (E)

*Vulpes macrotis mutica*

San Joaquin kit fox (E)

**Quads Containing Listed, Proposed or Candidate Species:**

PAIGE (311B)

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**County Lists**

No county species lists requested.

**Key:**

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

*Critical Habitat* - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** project within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether their habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environment documents prepared for your project.

### Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue,



hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

### Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

### Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These

lists provide essential information for land management planning and conservation efforts  
[More info](#)

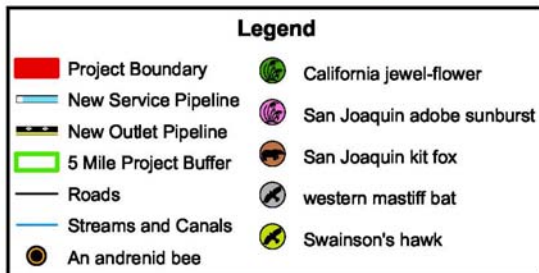
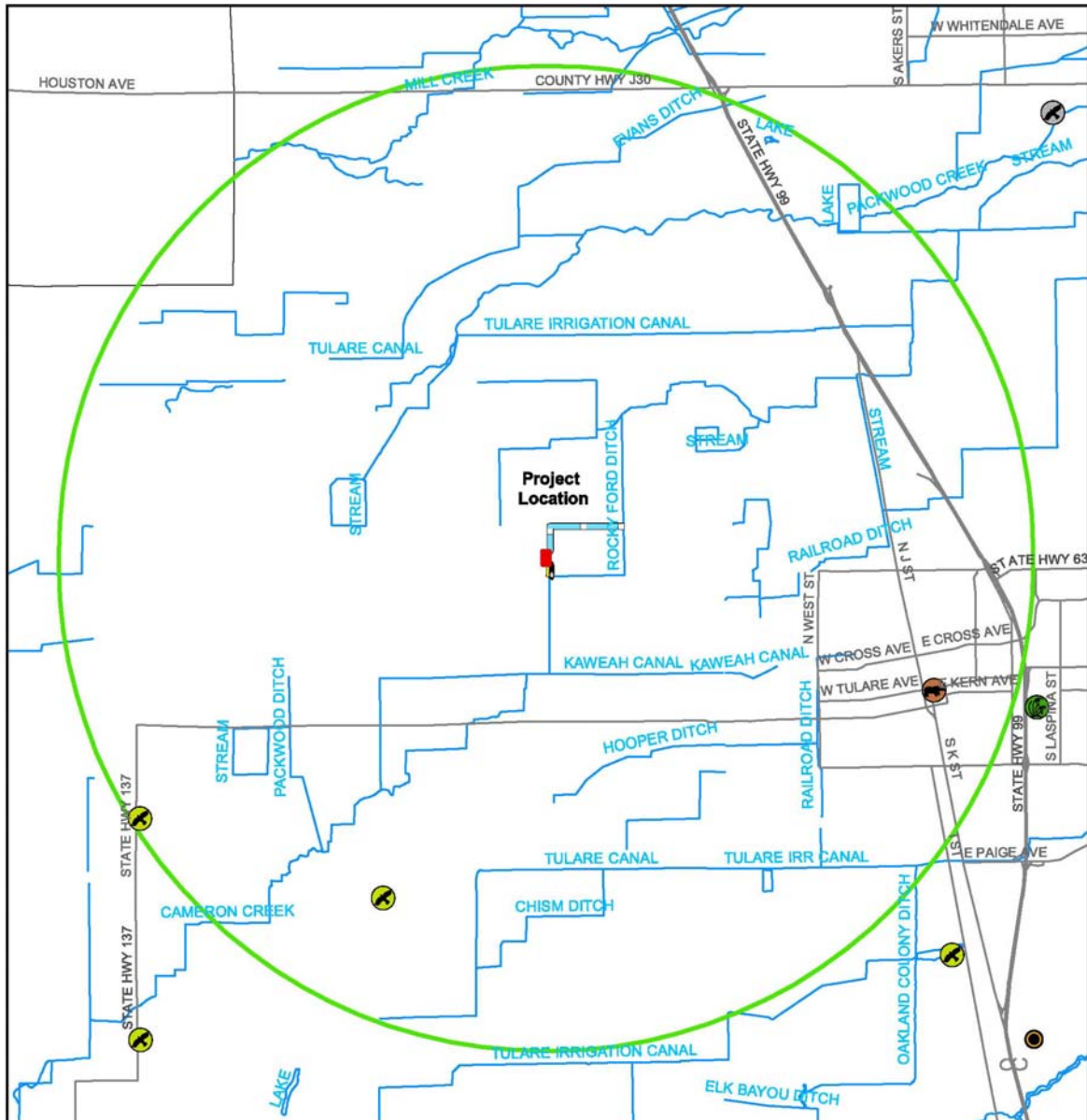
#### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

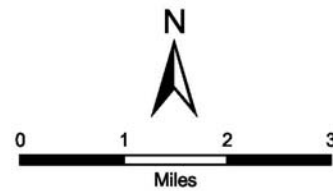
#### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May : 2009.





**Figure B-1**  
**Tulare Irrigation District**  
**Thompson Recharge/Regulation Basin**  
**Special Status Species**



## APPENDIX C

OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION  
SECTION 106 COMPLIANCE